ALTERNATIVE NO. 2
CHLOROFORM EFFLUENT LIMITATION

CITY OF AUBURN
WASTEWATER TREATMENT PLANT
PLACER COUNTY
PROPOSED WASTE DISCHARGE REQUIREMENTS AND
PROPOSED CEASE AND DESIST ORDER
NPDES PERMIT No. CA0077712

The Central Valley Regional Water Quality Control Board (Central Valley Water Board) issued a Tentative NPDES Permit for the City of Auburn (Discharger), Wastewater Treatment Plant (Facility) on 19 July 2010. The following tentative Alternative is for Central Valley Water Board consideration of a proposed final effluent limitation for chloroform, a California Toxic Rule (CTR) constituent, in accordance with the State Water Resources Control Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005 State Implementation Policy, or SIP). Although chloroform is a CTR constituent, the CTR does not include numeric criteria for chloroform. Therefore, this Alternative proposes determination of reasonable potential to cause or contribute to exceedances of water quality objectives for chloroform in the Tentative NPDES Permit in accordance with the following two options:

Option No. 1: The applicability of the CalEPA Cancer Potency Factor as a Drinking Water Level of 1.1 µg/L and the California Office of Environmental Health Hazard Assessment (OEHHA) Public Health Goal (PHG) of 1.1 µg/L (tentatively 1 µg/L), as implemented in the existing NPDES Permit (Order No. 2005-0030) with the resulting final monthly effluent limitation of 1.1 µg/L; or

Recent wastewater treatment plant effluent data demonstrates a reasonable potential to cause or contribute to an exceedance of the cancer potency factor. Data also demonstrates that the Discharger is unable to immediately comply with the existing (and now proposed) effluent limitation of 1.1 µg/L for chloroform. Cease and Desist Order (CDO) No. R5-2008-0010 provides until 16 March 2011 to come into compliance with the final effluent limitation for chloroform based on the cancer potency factor in existing Order No. R5-2005-0030. Therefore, this Alternative also proposes a compliance schedule, with compliance due 16 March 2011, in the Tentative CDO to correspond with the proposed final average monthly effluent limitation of 1.1 µg/L for chloroform.

Option No. 2: The applicability of the Department of Public Health (DPH) Primary Maximum Contaminant Level (MCL) for total trihalomethanes (sum of bromoform, bromodichloromethane, chloroform and dibromochloromethane) of 80 µg/L, which results in a determination of no reasonable potential to cause or contribute to an exceedance of water quality objectives for chloroform or total trihalomethanes.

Changes to the tentative NPDES permit and tentative CDO are shown below in strikeout/underline format.

NPDES Permit

For Option 1: Implementation of the Cancer Potency Factor of 1.1 µg/L

1. *Modify section II.M. of the Findings as follows:*

   M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow and percent removal requirements for 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS). The WQBELs consist of restrictions on aluminum, ammonia, beta-endosulfan, BOD_5, chlorodibromomethane, chloroform, diazinon, dichlorobromomethane, electrical conductivity, endrin aldehyde, heptachlor, lead, manganese, mercury, nitrate plus nitrite, nitrite, pH, total coliform organisms, total residual chlorine, and TSS. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for BOD_5, total coliform organisms, and TSS to meet numeric objectives or protect beneficial uses.

2. *Modify section IV.A.1.a, Table 6 of the Effluent Limitations to include the following effluent limitation:*

Table 6. Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Priority Pollutants						
Chloroform	µg/L	1.1	--	--	--	--

3. *Modify the Monitoring and Reporting Program, Attachment E, Section IV.A.1, Table E-3 (Effluent Monitoring) to include the following monitoring requirements:*

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Priority Pollutants				
Chloroform	µg/L	Grab	1/Month	[2,4]

4. *Modify the Fact Sheet, Attachment F, section IV.C.3.c (Constituents with No Reasonable Potential) as follows:*

   ~~**i. Chloroform.** Order No. R5-2005-0030 established effluent limitations for chloroform based on implementation of the narrative chemical constituent objective using the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) cancer potency factor represented by the one-in-a-million cancer risk level in drinking water of 1.1 µg/L. There are no applicable CTR criteria or MCLs for chloroform; however, the Department of Public Health~~

~~(DPH) has developed a Primary MCL of 80 µg/L for total trihalomethanes, including chloroform, which can be used to interpret the narrative chemical constituent objective. Because there are no immediate municipal uses downstream of the discharge, and since water that meets the Primary MCL is suitable for drinking, it is not appropriate to apply the OEHHA cancer potency factor to determine reasonable potential to exceed the Basin Plan's narrative chemical constituent objective. Thus, reasonable potential to cause or contribute to an exceedance of the narrative chemical constituent objective for chloroform was evaluated using the Primary MCL for trihalomethanes. This interpretation of the narrative objective is consistent with other recently adopted permits in the Central Valley Region.~~

~~The maximum monthly average effluent concentration was used to evaluate reasonable potential to exceed the Primary MCL. The maximum observed monthly average effluent concentration, which is also equivalent to the MEC, for chloroform was 56 µg/L. Therefore, the discharge does not have reasonable potential to cause or contribute to the Basin Plan's narrative chemical constituent objective and effluent limitations for chloroform will not be retained in this Order.~~

5. *Modify the Fact Sheet, Attachment F, section IV.C.3.d (Constituents with Reasonable Potential) as follows:*

   d. Constituents with Reasonable Potential. The Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for aluminum, ammonia, BOD_5, chlorine residual, chlorodibromomethane, <u>chloroform,</u> diazinon, dichlorobromomethane, electrical conductivity, beta-endosulfan, endrin aldehyde, heptachlor, lead, manganese, mercury, nitrate plus nitrite, nitrite, pathogens, pH, and TSS. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

6. *Insert subsection v in section IV.C.3.d of the Fact Sheet, Attachment F as follows:*

   <u>v. Chloroform</u>

   <u>(a) WQO.</u> <u>There are no applicable CTR criteria or MCLs for chloroform. However, CalEPA has developed a Cancer Potency Factor as a Drinking Water Level of 1.1 µg/L and the California Office of Environmental Health Hazard Assessment (OEHHA) has developed a Public Health Goal (PHG) of 1.1 µg/L (tentatively 1 µg/L) for chloroform, which can be used to interpret the narrative toxicity and chemical constituents objective in the Basin Plan for the protection of the MUN beneficial use. The maximum effluent concentrations were used to evaluate reasonable potential to exceed the standard for chloroform of 1.1 µg/L.</u>

   <u>(b) RPA Results.</u> <u>The maximum effluent concentration was used to evaluate reasonable potential to exceed the standard for protection human health over long exposure periods. The maximum observed effluent concentration of chloroform was 56 µg/L. Background receiving water data for chloroform is not</u>

available. Therefore, chloroform in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the cancer potency factor.

(c) WQBELs. This Order contains a monthly average effluent limitation for chloroform as shown in Table F-9 of this Fact Sheet, based on the Basin Plan's narrative toxicity and chemical constituent objective for protection of the MUN beneficial use.

(d) Plant Performance and Attainability. Analysis of the effluent data shows that the MEC of 56 µg/L is greater than applicable WQBEL. CDO No. R5-2008-0010 provides a compliance schedule to achieve compliance with the final effluent limitations for chloroform by 16 March 2011. Consistent with CDO No. R5-2008-0010, a compliance time schedule for compliance with the chloroform effluent limitations is established in CDO No. R5-2010-**XXXX**, with compliance with final effluent limitations required by 16 March 2011, in accordance with CWC section 13300, that requires preparation and implementation of a pollution prevention plan in compliance with CWC section 13263.3.

7. *Modify the Fact Sheet, Attachment F, section IV.C.4.a (WQBEL Calculations) as follows:*

   a. This Order includes WQBELs for aluminum, ammonia, BOD_5, chlorine residual, chlorodibromomethane, chloroform, diazinon, dichlorobromomethane, electrical conductivity, beta-endosulfan, endrin aldehyde, heptachlor, lead, manganese, mercury, nitrate plus nitrite, nitrite, pathogens, pH, TSS. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below.

8. *Modify the Fact Sheet, Attachment F, section IV.D, Table F-9 (Final Effluent Limitations) as follows:*

Table F-9. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis[1]
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Priority Pollutants							
Chloroform	µg/L	1.1	--	--	--	--	PHG

[1] DC – Based on the design capacity of the Facility.
TTC – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
CFR – Based on secondary treatment standards contained in 40 CFR Part 133.
BP – Based on water quality objectives contained in the Basin Plan.
PB – Based on treatment plant performance.
CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
PHG – Based on the CalEPA Cancer Potency Factor and OEHHA Public Health Goal.
PO – Based on effluent limitation contained in Order No. R5-2005-0030.
NAWQC – Based on USEPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
SEC MCL – Based on the Secondary Maximum Contaminant Level.
TMDL – Based on the TMDL for salinity and boron in the lower San Joaquin River.
MCL – Based on the Primary Maximum Contaminant Level.
Title 22 – Based on DPH Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).

9. *Modify the second paragraph of the Fact Sheet, Attachment F, section IV.D.3 (Satisfaction of Anti-Backsliding Requirements) as follows:*

   The effluent limitations in this Order are at least as stringent as the effluent limitations in the existing Order, with the exception of effluent limitations for ~~chloroform,~~ copper, methyl tertiary butyl ether, methylene blue active substances, nickel, oil and grease, persistent chlorinated hydrocarbon pesticides (except beta-endosulfan, endrin aldehyde, and heptachlor), settleable solids, silver, and zinc. The effluent limitations for these pollutants have not been retained from Order No. R5-2005-0030. Based on updated monitoring data that was not available at the time Order No. R5-2005-0030 was issued, these parameters do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Removal of the WQBELs in the previous permit is in accordance with CWA sections 303(d)(4) and 402(o), which allow for the removal of WQBELs for attainment waters where antidegradation requirements are satisfied. Removal of the WQBELs is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Therefore, the modifications to these effluent limitations do not violate anti-backsliding requirements.

10. *Modify the final paragraph of the Fact Sheet, Attachment F, section IV.D.3 (Satisfaction of Anti-Backsliding Requirements) as follows:*

    Order No. R5-2005-0030 established final mass-based effluent limitations for aluminum, chlorodibromomethane, chlorine residual, <u>chloroform,</u> diazinon, dichlorobromomethane, manganese, nitrate plus nitrite, nitrite, and lead. 40 CFR 122.45(f)(1)(ii) states that mass limitations are not required when applicable standards and limitations are expressed in terms of other units of measurement. The numerical effluent limitations for aluminum, chlorodibromomethane, chlorine residual, <u>chloroform,</u> diazinon, dichlorobromomethane, manganese, nitrate plus nitrite, nitrite, and lead established in this Order are based on water quality standards and objectives, which are expressed in terms of concentration. Pursuant to 40 CFR 122.25(f)(1)(ii), expressing the effluent limitations in terms of concentration is in accordance with Federal Regulations. Compliance with the concentration-based limits will ensure that significantly less mass of the pollutants is discharged to the receiving water. Discontinuing mass-based effluent limitations for these parameters is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Any impact on existing water quality will be insignificant. Therefore, relaxation of effluent limitations is allowed under CWA section 303(d)(4).

11. *Modify the Fact Sheet, Attachment F, section IV.D.5 (Stringency of Requirements for Individual Pollutants) as follows:*

    This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow and percent removal requirements for BOD_5 and TSS. The WQBELs consist of restrictions on aluminum, ammonia, beta-endosulfan, BOD_5, chlorodibromomethane, <u>chloroform,</u> diazinon, dichlorobromomethane, electrical conductivity, endrin aldehyde, heptachlor, lead, manganese, mercury, nitrate plus nitrite, nitrite, pH, total coliform

organisms, total residual chlorine, and TSS. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order includes effluent limitations for BOD_5, total coliform organisms, and TSS to meet numeric objectives or protect beneficial uses.

WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on 18 May 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to 30 May 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to 30 May 2000, but not approved by USEPA before that date, are nonetheless "*applicable water quality standards for purposes of the* [Clean Water] *Act*" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

12. *Modify the Fact Sheet, Attachment F, section VI.B.2 (Effluent Monitoring) as follows:*

    2. Effluent monitoring frequencies and sample types for flow (continuous), BOD_5 (three times per week), pH (continuous), TSS (three times per week), chlorodibromomethane (monthly), <u>chloroform (monthly),</u> dichlorobromomethane (monthly), mercury (monthly), aluminum (monthly), ammonia (twice per week), diazinon (monthly), electrical conductivity (five times per week), hardness (monthly), manganese (monthly), nitrate (two times per month), nitrite (two times per month), temperature (five times per week), total coliform organisms (three times per week), and total dissolved solids (monthly) have been retained from Order No. R5-2005-0030 to characterize the effluent and determine compliance with applicable effluent limitations.

13. *Modify the Fact Sheet, Attachment F, section VI.B.3 (Effluent Monitoring) as follows:*

    3. Monitoring data collected over the term of Order No. R5-2005-0030 for settleable solids, oil and grease, ~~chloroform,~~ copper, methylene blue active substances, silver, nickel, zinc, and cyanide did not demonstrate reasonable potential to exceed water quality objectives/criteria. Thus, specific monitoring requirements for these parameters have not been retained from Order No. R5-2005-0030.

14. Modify Attachment G, Summary of Reasonable Potential Analysis as follows:

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Chloroform	µg/L	56	NA	~~80~~1.1[9]	--	--	--	--	--	80	~~No~~Yes

General Note: All inorganic concentrations are given as a total recoverable.
MEC = Maximum Effluent Concentration
B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
C = Criterion used for Reasonable Potential Analysis
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
Water & Org = Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
Org. Only = Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
Basin Plan = Numeric Site-specific Basin Plan Water Quality Objective
MCL = Drinking Water Standards Maximum Contaminant Level
NA = Not Available

Footnotes:
(1) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour Average.
(2) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day Average.
(3) USEPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day Average.
(4) Pollutant does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives. See section IV.C.3 of the Fact Sheet (Attachment F).
(5) Criterion to be compared to the maximum effluent concentration.
(6) Criterion to be compared to the maximum upstream receiving water concentration.
(7) Water Quality for Agriculture.
(8) The Sacramento River from Knights Landing to the Delta, downstream of the discharge, is listed on the 2006 303(d) list as impaired for mercury. Therefore, this Order establishes a final, annual average mass loading limitation for mercury.
(9) California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) cancer potency factor represented by the one-in-a-million cancer risk level in drinking water of 1.1 µg/L.

For Option 2: Implementation of the MCL of 80 µg/L

1. Modify the Fact Sheet, Attachment F, section IV.C.3.c (Constituents with No Reasonable Potential) as follows:

i. Chloroform. ~~Order No. R5-2005-0030 established effluent limitations for chloroform based on implementation of the narrative chemical constituent objective using the California Environmental Protection Agency (Cal/EPA) Office of Environmental Health Hazard Assessment (OEHHA) cancer potency factor represented by the one-in-a-million cancer risk level in drinking water of 1.1 µg/L.~~ There are no applicable CTR criteria or MCLs for chloroform; however, the Department of Public Health (DPH) has developed a Primary MCL of 80 µg/L for total trihalomethanes, including chloroform, which can be used to interpret the narrative chemical constituent objective. ~~Because there are no immediate municipal uses downstream of the discharge, and since water that meets the Primary MCL is suitable for drinking, it is not appropriate to apply the OEHHA cancer potency factor to determine reasonable potential to exceed the Basin Plan's narrative chemical constituent objective. Thus,~~ The maximum effluent concentrations were used to evaluate reasonable potential to cause or contribute to an exceedance of the Primary MCL for total trihalomethanes

(the sum of bromoform, bromodichloromethane, chloroform, and dibromochloromethane) of 80 µg/L, which is used to interpret the Basin Plan's narrative chemical constituent objective for the protection of the MUN beneficial use and is implemented as a monthly average~~for chloroform was evaluated using the Primary MCL for trihalomethanes. This interpretation of the narrative objective is consistent with other recently adopted permits in the Central Valley Region.~~

The maximum ~~monthly average~~ effluent concentration was used to evaluate reasonable potential to exceed the Primary MCL. The maximum observed ~~monthly average~~ effluent concentration~~, which is also equivalent to the MEC,~~ for chloroform was 56 µg/L. Therefore, the discharge does not have reasonable potential to cause or contribute to the Basin Plan's narrative chemical constituent objective and effluent limitations for chloroform and total trihalomethanes will not be ~~retained~~ included in this Order.

2. *Modify the Fact Sheet, Attachment F, section IV.D.3 (Satisfaction of Anti-backsliding Requirements) as follows:*

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 CFR 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in the existing Order, with the exception of effluent limitations for chloroform, copper, methyl tertiary butyl ether, methylene blue active substances, nickel, oil and grease, persistent chlorinated hydrocarbon pesticides (except beta-endosulfan, endrin aldehyde, and heptachlor), settleable solids, silver, and zinc. The effluent limitations for these pollutants have not been retained from Order No. R5-2005-0030. Based on updated monitoring data that was not available at the time Order No. R5-2005-0030 was issued, these parameters do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Removal of the WQBELs in the previous permit is in accordance with CWA sections 303(d)(4) and 402(o), which allow for the removal of WQBELs for attainment waters where antidegradation requirements are satisfied. Removal of the WQBELs is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution No. 68-16. Therefore, the modifications to these effluent limitations do not violate anti-backsliding requirements.

The Basin Plan contains the narrative "chemical constituent" objective that requires, at a minimum, that waters with a designated MUN use not exceed California MCLs. In addition, the chemical constituent objective prohibits chemical constituents in concentrations that adversely affect beneficial uses. The California Primary MCL for total trihalomethanes is 80 µg/L. Total trihalomethanes include bromoform, dichlorobromomethane, chloroform, and chlorodibromomethane. The Cal/EPA Office of Environmental Health Hazard Assessment (OEHHA) has published the Toxicity Criteria Database, which contains cancer potency factors for chemicals, including chloroform, that have been used as a basis for regulatory actions by the regional boards,

departments, and offices within Cal/EPA. This cancer potency factor is equivalent to a chloroform concentration in drinking water of 1.1 µg/L (ppb) at the 1-in-a-million cancer risk level with an average daily consumption of two liters of drinking water over a 70-year lifetime. MUN is a designated beneficial use of the receiving water. However, there are no known active drinking water intakes in the receiving waters for several miles downstream of the discharge, and chloroform is a non-conservative pollutant. Therefore, to protect the MUN beneficial use of the receiving waters, the Regional Water Board finds that application of the USEPA MCL for total trihalomethanes for the effluent is appropriate, as long as the receiving water does not exceed the OEHHA cancer potency factor's equivalent receiving water concentration at a reasonable distance from the outfall.

The OEHHA public health goal is not used to base effluent limitations when there are no active drinking water intakes in the vicinity of the discharge, because chloroform is a volatile organic constituent that will degrade in the environment. If there are no intakes near the discharge, the MCL for total THMs is used with receiving water monitoring for chloroform to determine if the constituent is degrading in the environment before reaching any drinking water intakes. Therefore, the primary MCL for total trihalomethanes is used to regulate chloroform. The reduction in stringency of the effluent limitations for chloroform is in compliance with 40 CFR 122.44(l)(2)(i)(B)(1).

Cease and Desist Order

For Option 1: Implementation of the Cancer Potency Factor of 1.1 µg/L

1. *Modify Finding No. 3 as follows:*

   3. Order No. R5-2005-0030 included final effluent limitations for chloroform, dibromochloromethane (also known as chlorodibromomethane), and dichlorobromomethane, which required, in part:

Constituents	Units	Average Monthly	Average 4-Day	Average Daily	Average 1-Hour	Instantaneous Maximum
Chloroform	µg/L	1.1	--	--	--	--
	lbs/day	0.015	--	--	--	--
Dibromochloromethane	µg/L	0.41	--	0.84	--	--
	lbs/day	0.0057	--	0.012	--	--
Dichlorobromomethane	µg/L	0.56	--	1.0	--	--
	lbs/day	0.0078	--	0.014	--	--

2. *Modify Finding No. 5 as follows:*

   5. CDO No. R5-2005-0031 included a schedule for achieving compliance with the effluent limitations for aluminum, ammonia, chloroform, nitrate plus nitrite, and nitrite by 1 December 2009.

3. *Modify Finding No. 6 as follows:*

   6. On 25 January 2008, the Central Valley Water Board rescinded CDO No. R5-2005-0031 and adopted CDO No. R5-2008-0010, which retained the 1 December 2009 compliance date for ammonia and extended the time schedules for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrite, and nitrate plus nitrite. The extended compliance schedules allowed additional time for the Discharger to either upgrade its existing facility to meet all effluent limitations or to participate in a regionalization project and decommission its existing treatment facility, thus ceasing its current surface water discharge. CDO No. R5-2008-0010 required the Discharger to submit a formal decision regarding which option the Discharger had selected to achieve compliance with these constituents by 1 June 2008. If the formal decision included onsite improvements, the CDO required compliance with the final effluent limitations in Order No. R5-2005-0030 by 16 March 2011. If the formal decision included regionalization, the CDO required compliance with the final effluent limitations in Order No. R5-2005-0030 by 31 January 2013. The Discharger submitted a letter dated 30 May 2008 to the Central Valley Water Board providing a formal decision to construct improvements to the existing Facility; therefore, compliance with final effluent limitations is required by 16 March 2011.

4. Modify Finding No. 7 as follows:

7. On **<DATE>**, the Central Valley Water Board adopted Order No. R5-2010-XXXX rescinding Order No. R5-2005-0030 and prescribing renewed WDRs for the Facility. Order No. R5-2010-XXXX section IV.A.1.a contains Final Effluent Limitations for Discharge Point No. 001 which read, in part, as follows:

"Table 6. Final Effluent Limitations

Parameter	***Units***	***Effluent Limitations***				
		Average Monthly	***Average Weekly***	***Maximum Daily***	***Instantaneous Minimum***	***Instantaneous Maximum***
Priority Pollutants						
Chloroform	*µg/L*	*1.1*	--	--	--	--

5. Modify Finding No. 9 as follows:

9. The Central Valley Water Board finds that the Discharger is not able to consistently comply with the effluent limitations for aluminum, ammonia, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite. The schedules for completing the actions necessary to achieve full compliance exceed the adoption date of this Order. Additional time is necessary to provide the necessary treatment to comply with the requirements of Order No. R5-2010-XXXX. New time schedules are necessary in a CDO for all the constituents listed above. These limitations were new requirements that became applicable to the Order after the effective date of adoption of the WDRs, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

6. Modify Finding No. 10 as follows:

10. Immediate compliance with the effluent limitations for aluminum, ammonia, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite is not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.

    Consistent with CDO No. R5-2008-0010, the Regional Water Board is providing no later than 16 March 2011 for the Discharger to comply with the requirements for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite.

    The Discharger indicated in the *City of Auburn Wastewater Treatment Plant Infeasibility Report for Effluent Ammonia* (Infeasibility Report) submitted 10 July 2010 that additional time is required to comply with the final effluent limitations for ammonia. The Discharger identified five possible compliance options in the Infeasibility Report, which include:

    - Option 1 – Optimizing control of the aerators within the existing oxidation ditch;

- Option 2 – Constructing a separate anoxic zone upstream of the existing oxidation ditch;

- Option 3 – Adding a second oxidation ditch with a reduction in flows to each oxidation ditch;

- Option 4 – Providing full nitrification in the existing oxidation ditch and adding methanol to encourage denitrification in the tertiary sand filters; and

- Option 5 – Operating the existing oxidation ditch to provide full denitrification and obtain a dilution credit for nitrate.

The Discharger estimated in the Infeasibility Report that up to 2 ½ years are necessary to complete the necessary actions if Option 1 or Option 5 are selected and that up to 4 years are necessary to complete the necessary actions if Option 2, Option 3, or Option 4 are selected. The Regional Water Board is providing no later than 1 March 2013, if Option 1 or Option 5 is selected, or 1 September 2014, if Option 2, Option 3, or Option 4 is selected, for the Discharger to comply with these requirements.

7. *Modify Finding No. 15 as follows:*

15. Because CDO Nos. R5-2005-0031 and R5-2008-0010 provided the Discharger with five years to comply with effluent limitations for aluminum, <u>chloroform,</u> nitrate plus nitrite, and nitrite, the exception from mandatory minimum penalties pursuant to CWC section 13385(j)(3) does not apply for these parameters. Pursuant to CWC section 13263.3(d)(1)(D), this Order requires the Discharger to update and implement the existing pollution prevention plans for these parameters.

8. *Modify Finding No. 17 as follows:*

17. The compliance time schedule in this Order includes interim effluent limitations for aluminum, ammonia, chlorodibromomethane, <u>chloroform,</u> dichlorobromomethane, nitrate plus nitrite, and nitrite. In developing the interim limitations for aluminum, chlorodibromomethane, <u>chloroform,</u> dichlorobromomethane, nitrate plus nitrite, and nitrite, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9 percent of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row, 3rd Edition, January 1986*). Where actual sampling shows an exceedance of the proposed mean plus 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. In developing the interim limitations, when there are less than 10 sampling data points available, the USEPA *Technical Support Document for Water Quality- based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a maximum daily limitation based on a long-term average objective. In

this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than 10 sampling points for a constituent, an interim limitation is based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim limitation (TSD, Table 5-2). The following table summarizes the calculations of the interim performance-based effluent limitations for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite:

Interim Effluent Limitation Calculation Summary

Parameter	Units	MEC	Mean	Std. Dev.	# of Samples	Interim Maximum Daily Effluent Limitation
Chloroform	µg/L	56	21	14	38	67

8. Modify Provision 1 as follows:

1. The Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations in R5-2010-XXXX for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite:

Task	**Date Due**
i. Update and implement Pollution Prevention Plan[1] as specified in CWC Section 13263.3 for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite	Within **90 days** after adoption of this Order
ii. Progress Report[2]	**1 December 2010**
iii. Full compliance with aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite effluent limitations	**16 March 2011**

[1] The pollution prevention plan shall be updated and implemented for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite, as appropriate, and shall meet the requirements specified in CWC section 13263.3.

[2] The progress report shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, and recommendations for additional measures as necessary to achieve full compliance by the final date.

9. Modify Provision 3 as follows:

3. The following interim effluent limitations for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite shall be effective immediately, and shall remain in effect through **15 March 2011**, or when the Discharger is able to come into compliance with the final effluent limitations, whichever is sooner.

Parameter	Units	Maximum Daily Effluent Limitation
Chloroform	µg/L	67

Tentative Chloroform Effluent Limitations Alternative No. 2
City of Auburn Wastewater Treatment Plant
Placer County